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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,941	08/02/2006	Seok-Chul Kwon	ASIAP024.US01	2504
45965	7590	12/12/2008	EXAMINER	
TIPS GROUP c/o Intellevate LLC P. O. BOX 52050 Minneapolis, MN 52050			CHAI, LONGBIT	
			ART UNIT	PAPER NUMBER
			2431	
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			12/12/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/552,941	KWON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	LONGBIT CHAI	2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 02 August 2006.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 14 October 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____ .

## **DETAILED ACTION**

### ***Priority***

1. Applicant's claim for benefit of foreign priority under 35 U.S.C. 119 (a) – (d) is acknowledged.

The application is filed on 8/2/2006 but is a 371 case of PCT/KR03/00992 application filed 5/20/2003 and has a foreign priority application filed on 4/14/2003.

### ***Claim Objections***

2. Claims 9 is objected to because of the following informalities: "A computer-readable storage medium recorded with a program" should be replaced with "A computer-readable storage medium recorded with computer-executable instructions of a program", respectively. Appropriate correction(s) is (are) required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1 – 7, 9 – 14, 16 – 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et al. (U.S. Patent 6,842,861), in view of Farber et al. (U.S. Patent 6,415,280).

As per claim 1, 9 and 16, Cox teaches method for removing computer viruses comprising the steps of:

(A) if a function to be used to search information about areas infectable by viruses has been changed (Cox: Column 9 Line 17 – 22: the anti-virus program polls and downloads the updated / modified version periodically), restoring the function to be in a normal state (Farber: see below).

However, Cox does not disclose expressly restoring the function to be in a normal state.

Farber teaches restoring the function to be in a normal state (Farber: Column 34 Line 45 – 66 and Column 12 Line 37 – 65: The system periodically performing integrity check (i.e. signature / checksum validation) on the executable applications on the system (after being download / stored to the system) and restore the good copy of the software in case the executable applications has been corrupted by the malicious computer virus – i.e. the file signature derived is changed).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Farber within the system of Cox because (a) Cox teaches polling / downloading the anti-virus program for the updated / modified version periodically (Cox: Column 9 Line 17 – 22) and (b) Farber teaches a

security enhanced mechanism for computer virus protection by periodically performing integrity check (i.e. signature / checksum validation) on the executable applications on the system (after being download / stored to the system) and restore the good copy of the software in case the executable applications has been corrupted (Farber: Column 34 Line 45 – 66 and Column 12 Line 37 – 65).

(B) carrying out a procedure for scanning of infection and a disinfection procedure for processes residing in a memory and associated files scanned using a normal function (Cox: Column 10 Line 49 – 52).

As per claim 2 and 10, Cox as modified teaches the normal function at the step (B) is the function determined to be unchanged, or restored using a previously-stored function when the function is determined to be changed (Farber: Column 34 Line 45 – 66 and Column 12 Line 37 – 65).

As per claim 3, 5, 11 and 13, Cox as modified teaches scanning a process residing in the memory (Farber: Column 34 Line 45 – 66: The system periodically performing integrity check (i.e. signature / checksum validation) on the executable applications on the system (after being download / stored to the system). Examiner notes the executable applications are qualified as “processes” residing on the system); determining whether or not the infected process is disinfectable, and disinfecting the process when it is determined that the infected process is disinfectable, while killing the process when it is determined that the infected process cannot be disinfected; and

searching for a file associated with the infected process, and scanning and disinfecting the searched file (Cox: Column 10 Line 49 – 52: scanning and deleting the file) & (Farber: Column 34 Line 45 – 66 and Column 12 Line 37 – 65).

As per claim 4, 12 and 17, Cox as modified teaches the procedure for scanning of infection and the disinfection procedure are further carried out for thread areas of the memory (Cox: Column 10 Line 45 – 49: multi-threads).

As per claim 6 and 14, Cox as modified teaches scanning and disinfecting the thread areas of the memory (Cox: Column 10 Line 45 – 49: the memory area storing data / program involved in the multi-thread processing are qualified as the thread areas of the memory); scanning a process residing in the memory; determining whether or not the infected process is disinfectable, and disinfecting the process when it is determined that the infected process is disinfectable, while killing the process when it is determined that the infected process cannot be disinfected; and searching for a file associated with the process, and scanning and disinfecting the searched file (Cox: Column 10 Line 49 – 52: scanning and deleting the file) & (Farber: Column 34 Line 45 – 66 and Column 12 Line 37 – 65).

As per claim 7 and 18, Cox as modified teaches the function is provided by DOS, Macintosh, Windows, OS/2, Unix, or Linux (Cox: Column 5 Line 42).

As per claim 20, Cox as modified teaches the virus-removing apparatus is a hardware device applied to a personal computer (PC), a personal digital assistant (PDA), a mobile phone, and industrial equipment including semiconductor manufacturing equipment (Cox: Figure 1).

4. Claims 8, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et al. (U.S. Patent 6,842,861), in view of Farber et al. (U.S. Patent 6,415,280), and in view of Bartleson et al. (U.S. Patent 6,934,857).

As per claim 8, 15 and 19, Cox as modified does not disclose expressly the function is an application program interface (API) function or a system call.

Bartleson teaches the function is an application program interface (API) function or a system call (Bartleson: Column 5 Line 32 – 48).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Bartleson within the system of Cox as modified because (a) Cox teaches polling / downloading the anti-virus program for the updated / modified version periodically (Cox: Column 9 Line 17 – 22) and (b) Bartleson teaches a security enhanced mechanism by using a API calls included by a security patch to monitor the user computer is deemed hostile or inappropriate (Bartleson: Column 5 Line 32 – 48).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LONGBIT CHAI whose telephone number is (571)272-3788. The examiner can normally be reached on Monday-Friday 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Longbit Chai/

Longbit Chai Ph.D.  
Primary Patent Examiner  
Art Unit 2431  
7/25/2008